



## DEPARTMENT OF TRANSPORTATION

### Federal Highway Administration

[Docket No. FHWA-2023-0015]

#### Agency Information Collection Activities: Request for Comments for a New Information Collection

**AGENCY:** U.S. Department of Transportation (DOT).

**ACTION:** Notice and request for comments.

**SUMMARY:** The DOT invites public comments about our intention to request the Office of Management and Budget's (OMB) approval for a new information collection, which is summarized below under **SUPPLEMENTARY INFORMATION**. We are required to publish this notice in the **Federal Register** by the Paperwork Reduction Act of 1995.

**DATES:** Please submit comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

**ADDRESSES:** You may submit comments identified by DOT Docket ID Number 2023-0015 by any of the following methods:

*Web Site:* For access to the docket to read background documents or comments received go to the Federal eRulemaking Portal: Go to <http://www.regulations.gov>.

Follow the online instructions for submitting comments.

*Fax:* 1-202-493-2251.

*Mail:* Docket Management Facility, U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

*Hand Delivery or Courier:* U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue S.E., Washington, DC 20590, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Govind Vadakpat Ph.D., 202-366-5004, Smart Infrastructure Program Manager, Intelligent Transportation Systems Joint Program Office (ITS JPO), Department of Transportation, 1200 New Jersey Avenue, SE., Washington, DC

20590. Office hours are from 8 a.m. to 5 p.m., Monday through Friday, except Federal holidays.

#### **SUPPLEMENTARY INFORMATION:**

*Title:* U.S. DOT Intersection Safety Challenge – System Assessment and Virtual Testing Competition.

*Background:* Improving the safety of pedestrians, bicyclists, and other vulnerable road users is of critical importance to achieving the objectives of the U.S. Department of Transportation (DOT) National Roadway Safety Strategy (NRSS) and DOT's vision of zero fatalities and serious injuries across our transportation system. According to data from the National Highway Traffic Safety Administration (NHTSA), in 2020 there were 10,626 traffic fatalities in the United States at roadway intersections, including 1,674 pedestrian and 355 bicyclist fatalities. These fatalities at intersections represent 27% of the total of 38,824 road traffic deaths recorded in 2020.

In response to these growing concerns and as part of the NRSS Call to Action, the DOT Intersection Safety Challenge (hereafter, “the Challenge”) incentivizes the development of new, cost-effective, real-time roadway Intersection Safety System (ISS) concepts that apply emerging technologies to identify and mitigate unsafe roadway intersection conditions involving vehicles and vulnerable road users. Innovative ISS concepts may utilize emerging technologies, e.g., machine sensing and perception, data fusion, artificial intelligence (AI) and machine learning (ML), trajectory and path prediction, vehicle-to-everything (V2X) communications, and real-time decision-making to generate anticipatory warning systems and other safety-countermeasures.

In the U.S. DOT Intersection Safety Challenge – System Assessment and Virtual Testing Competition, participants will develop and improve algorithms for the detection, localization, and classification of vulnerable road users and vehicles using government-supplied sensor data.

These government-supplied data include contemporaneous feeds from diverse sensor technology deployed at the roadside in a controlled test intersection. Participants will use these data and their resulting algorithms to predict future intersection conditions and identify potentially unsafe conditions (current or predicted). The accuracy of these predictions will be measured against observed ground truth conditions as part of a broader set of judging criteria. To be eligible for a prize, submissions must include a structured description of identified and predicted intersection

conditions as well as the executable computer programming code required to support independent validation. Participants may submit an optional Concept Paper describing their ISS concept and the potential of this concept to address the vision and objectives of the Challenge. The government anticipates awarding multiple prizes. Detailed rules and judging criteria will be provided when the prize competition is formally announced.

*Respondents:*

Approximately 40 participants (or participant teams) are expected to respond to the prize competition.

*Frequency:*

Participants may submit the structured description and supporting computer programming code (for validation) up to three times during the duration of the U.S. DOT Intersection Safety Challenge – System Assessment and Virtual Testing Competition. Participants may submit an optional Concept Paper at any time prior to the close of the prize competition.

*Estimated Average Burden per Response:*

Approximately 2,000 total staff-hours is estimated for a participant to complete up to 3 submissions with all required elements for the U.S. DOT Intersection Safety Challenge – System Assessment and Virtual Testing Competition. Further, the completion of the optional Concept Paper is estimated at 170 staff-hours.

*Estimated Total Annual Burden Hours:*

40 respondents x 2,170 hours = 86,800 hours.

*Public Comments Invited:* You are asked to comment on any aspect of this information collection, including: (1) Whether the proposed collection is necessary for DOT's performance; (2) the accuracy of the estimated burdens; (3) ways for DOT to enhance the quality, usefulness, and clarity of the collected information; and (4) ways that the burden could be minimized, including the use of electronic technology, without reducing the quality of the collected information. The agency will summarize and/or include your comments in the request for OMB's clearance of this information collection.

**Authority:** The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; and 49

CFR 1.48.

**Issued on:** May 12, 2023.

**Michael Howell,**

*Information Collection Officer.*

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